

CLARIFICATIONS TO THE DEEP TOWED SEAFLOOR MAPPING SYSTEM SPECIFICATIONS

1) Towbody/Cable Configuration

Requirements for the Deep Towed Seafloor Mapping System include a vendor supplied towbody cable of operating at a depth of 3000 meters maximum but typically operated at depth of 2000m or less at tow speeds of <5 knots. The system will be utilized in conjunction with investigations of the geologic structure of the seafloor and the shallow sub-bottom for continental shelf, slope and margin regions. The system is intended to be flexible and will not be dedicated to any given ship. The tow body thus must be portable and capable of being deployed from a wide range of "ships of opportunity" using over the side handling equipment typical of vessels >50 ft. The 800-lb. maximum weight requirement may be exceeded if the Emergency Recovery Option is accepted or for the purposes of integrating an acoustic positioning transponder as long as the "ships of opportunity" requirement is not compromised. The system as initially configured will not have a dedicated cable but instead will rely on existing coaxial cables on board the available "ship of opportunity" such as those typically installed on UNOLS vessels (max=9000m). Two-body tow system configurations (i.e. tow body and depressor) which reduce cable required to get to depth and enhance tow body stability will be considered as long as the requirement for portability, flexibility, and ease of handling from a wide range of vessels is not compromised.

2) Towbody Acoustic Positioning System Requirements

NRL recognizes the limitations of short baseline acoustic systems in determining positions for tow bodies in deep water. Typical operating planned operating depths for this system will be less than 2000 meters and requirements for desired acoustic positioning system accuracy were based on those shallower operating depths. Proposals for alternative positioning systems and accuracy will be considered.

3) Compatibility with existing EdgeTech SubScan System

NRL currently is utilizing and EdgeTech Subscan system in conjunction with it shallow (<500m) research efforts. In order to eliminate the need to maintain multiple topside data acquisition systems, NRL requires that the data acquisition system for the new deep towed survey system be capable of collecting and storing data from the existing system and be compatible with the existing towbody and 500m A301301 data cable. The existing system provides digital sidescan data in EdgeTech DF1000 format and chirp sub bottom profiler data in SEG Y format.

4) Survey Planning Software or Helmsman display

There is no requirement for survey planning software or a helmsman display although both are desirable.

5) System Integration

Solicitation is for the supply and integration of the various components of the system i.e. topside data acquisition system, acoustic positioning system, tow vehicle motion sensing package, sidescan sonar system, chirp sub-bottom profiling system and any accepted options (swath bathymetry, emergency recovery, fiber optic interface etc.) Topside components of the data acquisition system, acoustic positioning system, telemetry system are to be integrated into a minimum of one or two portable off the shelf shipping containers of the approximate size specified in the specifications. Additional details available on request. Integration to be completed at vendors facility with system check out to be completed either at NRL or at mutually acceptable location.